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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JEFFREY B. HOKE, JOHN R. NOVAK,
JOHN J. STEGER, TERENCE C. POLES,
L. MICHAEL QUICK, RONALD M. HECK,
ZHICHENG HU, and MICHAEL DURILLA

Appeal 2010-002246
Application 09/766,723
Technology Center 1700

Before EDWARD C. KIMLIN, TERRY J. OWENS, and
CATHERINE Q. TIMM, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 49-60, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

THE INVENTION

The Appellants claim an apparatus comprising an ozone treating catalyst for treating the atmosphere. Claims 49 and 51 are illustrative.¹

49. An apparatus for treating the atmosphere comprising an outdoor component of an HVAC system bearing on ozone treating catalyst, said outdoor component being operatively attached to an immovable structure.

51. An apparatus for treating the atmosphere comprising a substrate bearing an ozone treatment catalyst added to an outdoor component of an HVAC system, said outdoor component being operatively attached to an immovable structure.

THE REFERENCES

Galligan	5,620,672	Apr. 15, 1997
Fromson	5,711,071	Jan. 27, 1998
Hager (as translated)	DE 4,007,964	Sep. 19, 1991
Beitz (as translated)	EP 0 634 205	Jan. 18, 1995

THE REJECTIONS

The claims stand rejected as follows: claims 49-59 under 35 U.S.C. § 103 over Fromson in view of Hager; claim 60 under 35 U.S.C. § 103 over Fromson in view of Hager and the Appellants' admitted prior art; claims 49-59 under 35 U.S.C. § 103 over Beitz; and

¹ The Appellants' claim term "immovable" appears to have the meaning of "stationary", which is the term used in the original claims. The Appellants state that "[f]or purposes of this application, a substrate is considered stationary when it is operatively attached to a non-moving structure. For example, the fan or adjustable louvers of an air handling system for a building are considered stationary, even though the fan revolves and the louvers can be moved" (Spec. 5:26-32).

claims 49-60 under the judicially created doctrine of obviousness-type double patenting over claims 2 and 22-25 of Galligan.

OPINION

We affirm the Examiner's rejections.

Rejections over Fromson in view of Hager

The Appellants present a substantive argument as to the separate patentability of two groups of claims: 1) claims 49 and 50, and 2) claims 51 and 52 (Br. 10-12). We therefore limit our discussion to one claim in each of those groups, i.e., independent claims 49 and 51. Claim 50 stands or falls with claim 49, and claim 52 stands or falls with claim 51. Regarding claims 53-60 the Appellants merely assert that what is recited is not taught or suggested in the references (Br. 12-13). That is tantamount to merely pointing out the differences in what the claims cover, and is not a substantive argument as to the separate patentability of those claims. Hence, claims 53-60 stand or fall with claim 49 from which they indirectly depend. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Claim 49

Fromson discloses "catalytic structures and their method of manufacture particularly as a part of or in association with heat exchangers, such as automotive radiators and air conditioning condensers" (col. 1, ll. 5-7), and teaches that "[t]he catalytically active material may comprise the fins of the heat exchanger or be incorporated into a separate catalytic structure" (col. 1, ll. 7-9). Fromson indicates that the catalyst can treat ozone (col. 1, ll. 10-12).

Hager discloses (pp. 2-3):

Cu₂O or CuO or a mixture of the two is mixed with a binder that results in a water-resistant but porous coating. This coating converts poisonous ozone molecules directly into non-poisonous oxygen molecules....

This coating can be applied to walls, buildings, fences, the underbodies of vehicles, road barriers and carpets. It can also be worked into the coverings of roadways. Since most of these objects lie close to vehicles that product pollutants, ozone that develops due to photo-oxidation is broken down catalytically.

The Appellants argue “that the components of an automobile encounter vastly different conditions in terms of air space velocity and temperature compared to the air space velocity and temperature conditions encountered by a component of an HVAC system attached to an immovable structure such as a residential or commercial building” (Br. 11; Reply Br. 6).

The Appellants have not provided evidence that one of ordinary skill in the art would have considered the applicability of Fromson’s ozone treating catalyst to be limited to certain air space velocities and temperatures. The Appellants have provided mere attorney argument to that effect, and such arguments of counsel cannot take the place of evidence. *See In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Hager’s disclosure that the ozone treating catalyst is effective on both a vehicle underbody, which is a movable structure, and a building, which is an immovable structure (p. 2), would have indicated to one of ordinary skill in the art that Fromson’s ozone treating catalyst, which is disclosed as being effective on heat exchangers generally (col. 1, l. 6), would be effective not only on the exemplified radiators and air conditioning condensers of an automobile,

which is movable, but also on an outdoor component of a HVAC system of a building, which is immovable.

We therefore are not persuaded of reversible error in the rejection over Fromson in view of Hager of claim 49 and claims 50 and 53-60 that stand or fall therewith.

Claim 51

The Appellants argue that “[a]n advantage of having a separate substrate [is that it] can be removably mounted for replacement, rejuvenation or cleaning” (Br.12).

The Appellants’ claim 51 does not require the substrate to be removably mounted. Hence, the Appellants’ argument is unpersuasive as being directed toward a limitation that is not in the claim. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982). Fromson’s disclosure that the catalytically active material can be incorporated into a separate catalytic structure to avoid high temperature areas and to increase the catalytic surface area (col. 1, ll. 7-9; col. 4, l. 59 – col. 5, l. 21) would have led one of ordinary skill in the art, through no more than ordinary creativity in view of Hager, to place catalytically active material on a separate substrate in an outdoor HVAC unit based upon those factors and common factors such as practicality, cost, convenience, etc. *See KSR Int’l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (In making the obviousness determination one “can take account of the inferences and creative steps that a person of ordinary skill in the art would employ”).

Accordingly, we are not convinced of reversible error in the rejection over Fromson in view of Hager of claim 51 and claim 52 that stands or falls therewith.

Rejection over Beitz

The Appellants argue claims 49-59 as a group (Br. 13-15). We therefore limit our discussion to one claim in that group, i.e., claim 49. Claims 50-59 stand or fall with claim 49. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Beitz discloses a “catalyst for breaking down ozone that can be installed without difficulty in air conditioners, ventilation systems and automobiles and also causes a significant reduction in the ozone content in the inhaled air” (p. 3). The catalyst is a noble metal-coated net wherein the “net is a two-dimensional structure and can be installed in a space-saving manner even in systems and devices that are already present, e.g. in ventilation ducts to the passenger compartment of automobiles that are present, at the outflow side of air conditioners and ventilation systems, and also in devices and machines like photocopiers that generate ozone, preferably before the outlet of air that is conducted through the device and/or the machine by a fan” (p. 4).

The Examiner argues that one of ordinary skill in the art would have added Beitz’s catalyst to an outdoor component of an air conditioning or ventilation system to reduce the influx of ozone into the air conditioned building (Ans. 4-5).

The Appellants argue that ozone abatement by a catalyst on an outdoor component of a HVAC system does not result in the treated air being drawn into the air conditioned building (Br. 13-14).

The Appellants do not support their argument with evidence, and the mere attorney argument provided is not a substitute for evidence. *See De Blauwe*, 736 F.2d at 705. Because the air that enters a building comes from the atmosphere surrounding the building, it appears that removing ozone from that any part of that atmosphere, e.g., at an outdoor component of the building's HVAC system, would reduce the ozone in the air entering the building to some extent. Furthermore, Beitz's teaching that the catalyst causes a significant reduction in the ozone content of inhaled air (p. 3) would have led one of ordinary skill in the art, through no more than ordinary creativity, to use the catalyst not only to reduce the ozone within the building (e.g., by placing catalyst at the outflow side of air conditioners and ventilation systems; p. 4) but also at any other location where air is inhaled, such as at an outdoor component of an HVAC system. That would be a predictable solution, in the vicinity of that outdoor component, to the known problem of ozone in inhaled air. *See KSR*, 127 S. Ct. at 1742:

When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

The Appellants argue that Beitz's catalyst is for use at ambient temperatures and below, whereas the Appellants' catalyst can work at elevated temperatures (Br. 14).

Beitz discloses that the catalyst "produces an ozone reduction not only at normal ambient temperature (20°C) but also with a somewhat lower activity at 0°C. Heating of the catalyst can be dispensed with" (p. 7). Thus, Beitz teaches that the catalyst is effective at ambient temperature, is less effective at 0°C, and does not have to be heated, but Beitz does not disclose that the catalyst is ineffective when heated. Moreover, the Appellants' only claim that recites a temperature is claim 58, and that temperature is "above 25°C."² Temperatures above 25°C include temperatures only infinitesimally higher than 25°C, which is a typical ambient temperature similar to that disclosed by Beitz.

The Appellants argue that "[t]he skilled artisan would not be motivated to move the catalysts associated with an indoor component or an automobile air conditioner to an outdoor component of an air conditioning system that is subject to different airflow conditions, temperatures and other environmental conditions that may degrade the catalyst" (Br. 15).

That argument is unpersuasive as being unsupported attorney argument. *See De Blauwe*, 736 F.2d at 705.

² Claim 57 recites that the ozone treating catalyst can be disposed on an air contacting surface of a component downstream from a heat exchanger's heat transfer surface, but does not require that the air contacting surface be at any particular temperature.

For the above reasons we are not convinced of reversible error in the rejection over Beitz of claim 49 and claims 50-59 that stand or fall therewith.

Obviousness-type double patenting rejection

The Appellants do not challenge the obviousness-type double patenting rejection (Br. 9, fn 2). Accordingly we summarily affirm that rejection.

DECISION

The rejections of claims 49-59 under 35 U.S.C. § 103 over Fromson in view of Hager, claim 60 under 35 U.S.C. § 103 over Fromson in view of Hager and the Appellants' admitted prior art, claims 49-59 under 35 U.S.C. § 103 over Beitz, and claims 49-60 under the judicially created doctrine of obviousness-type double patenting over claims 2 and 22-25 of Galligan are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

tc

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